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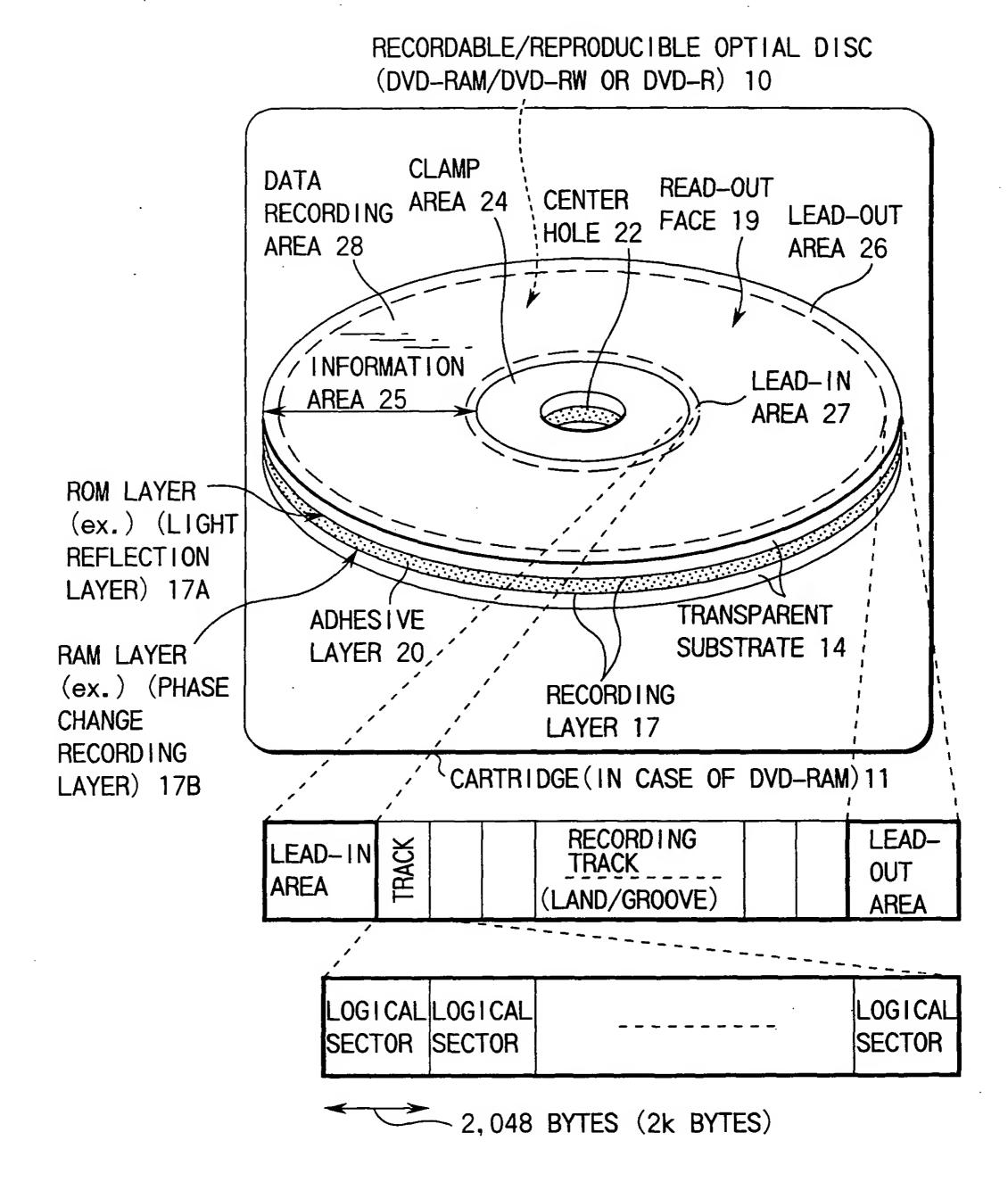


FIG. 1

	1	ONE SECTOR	PHYS10	CAL	SECTOR)		; 
PREVIOUS SECTOR	HEADER (EMBOSS)	SYNCHRO- NIZATION CODE	MODU- LATED SIGNAL		SYNCHRO- NIZATION CODE	MODU- LATED SIGNAL	HEADER OF NEXT SECTOR

FIG. 2

(CLU		16 SECT	 kB)	 
SECTOR 501a	SECTOR 501b	SECTOR 501c		SECTOR 501q

FIG.3

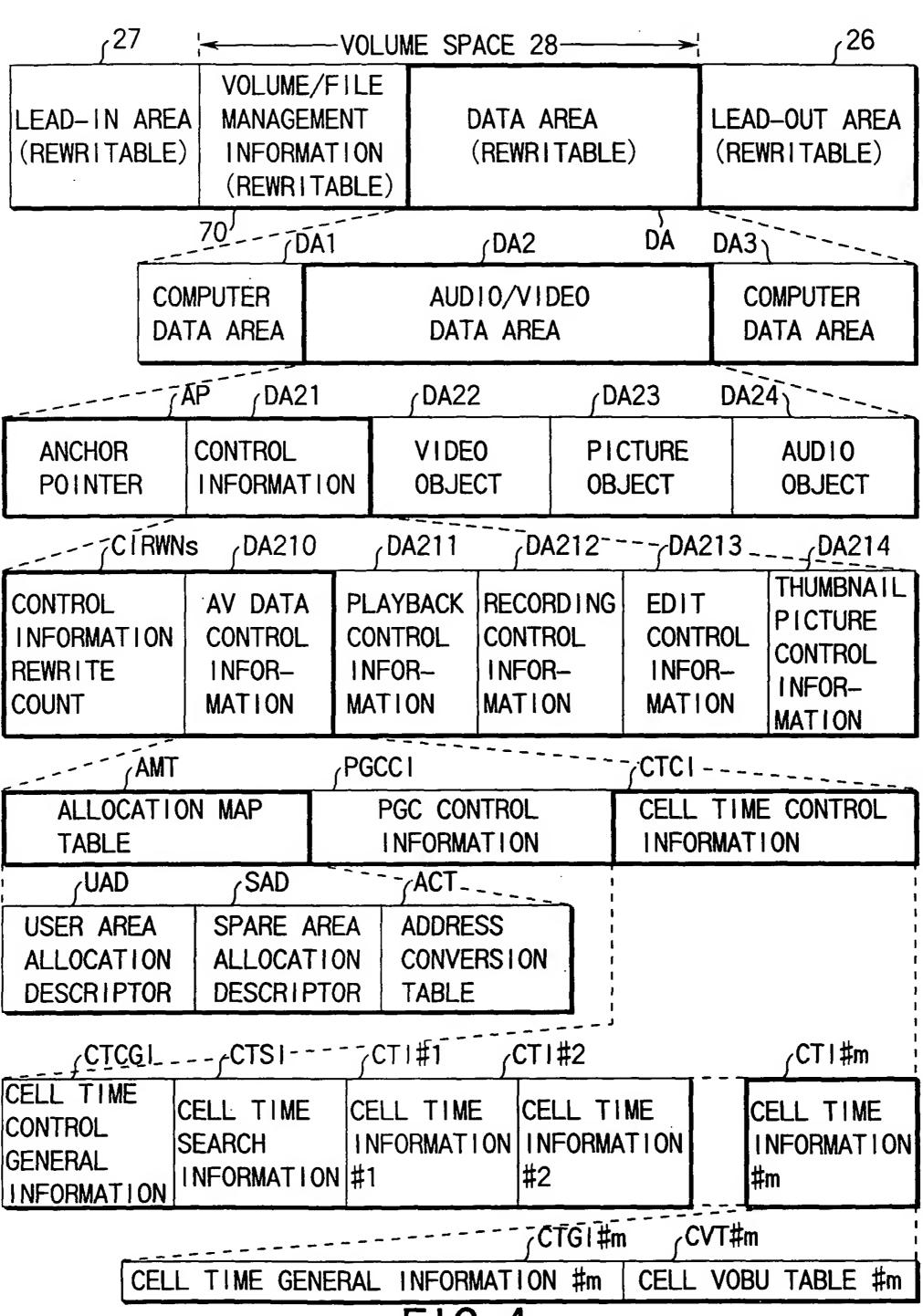


FIG. 4

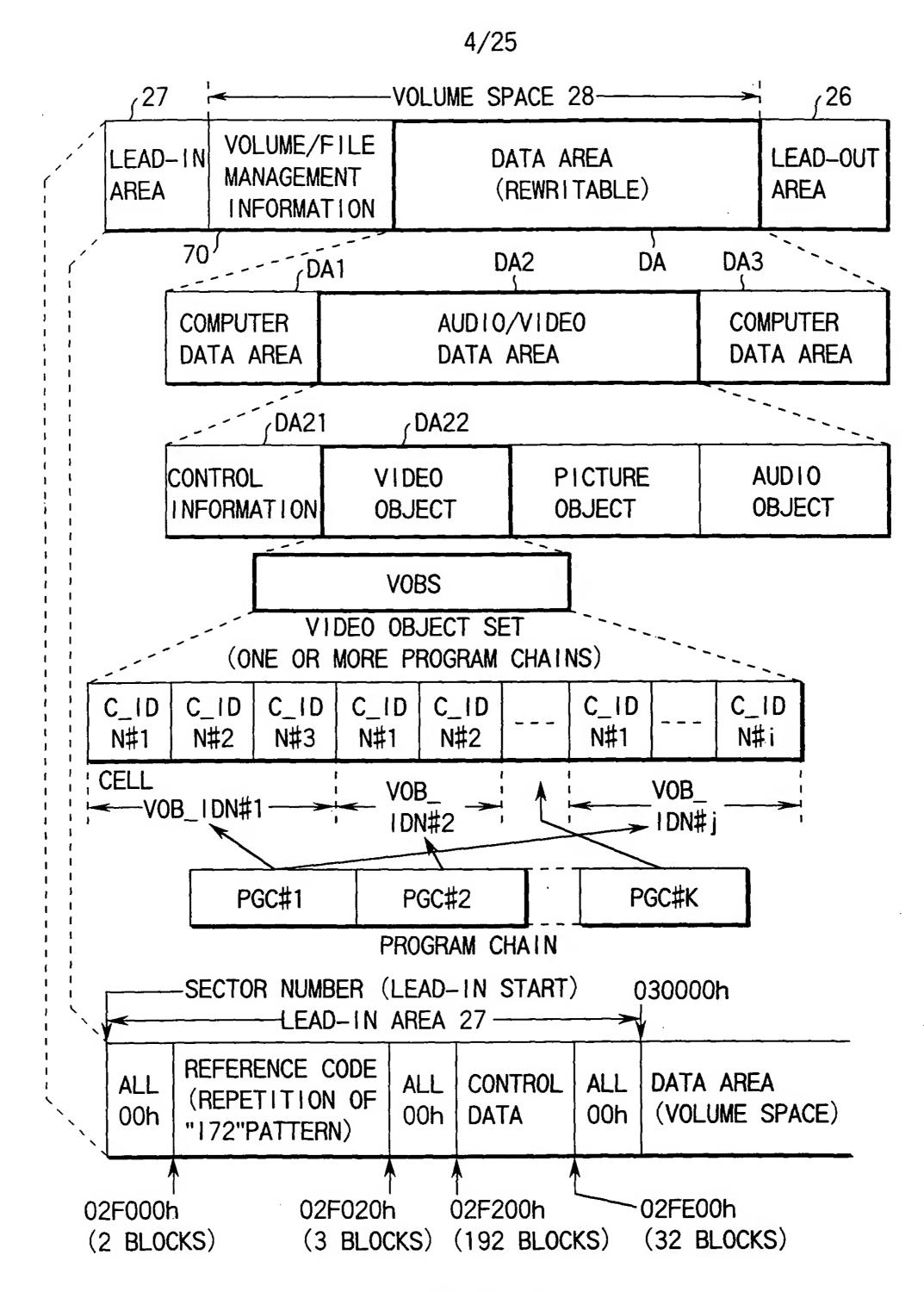


FIG. 5

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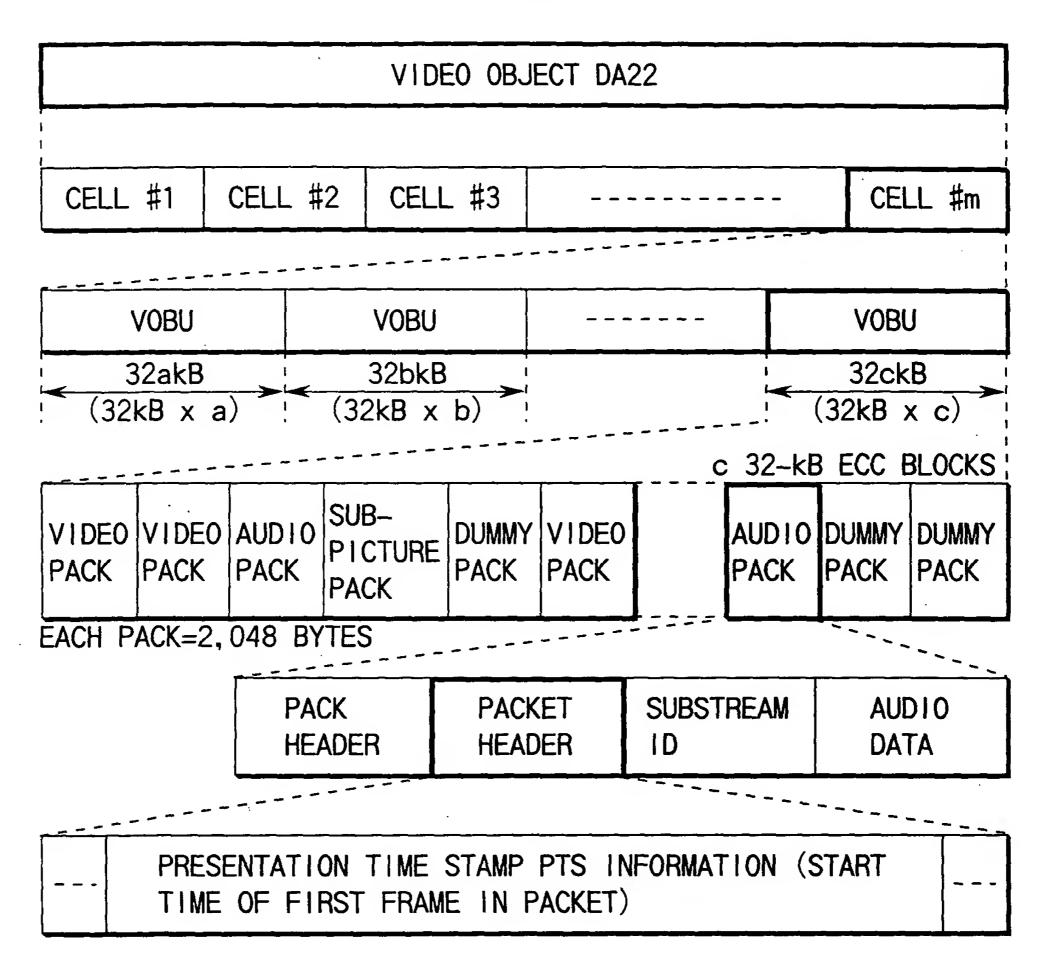


FIG.6

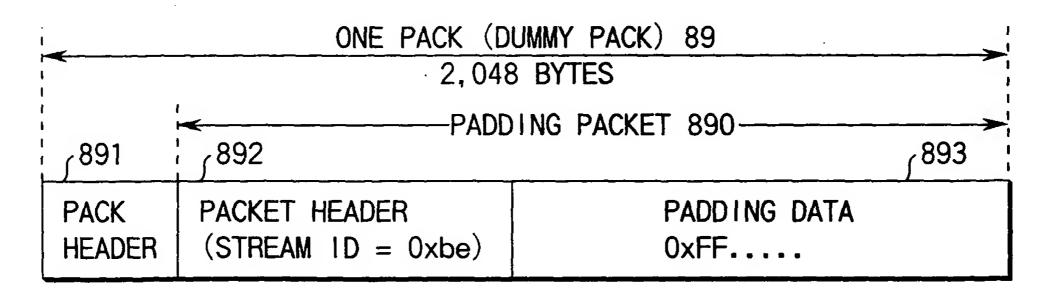


FIG. 7

NUMBER PICTURE IN VOBU	S P	IUMBER ICTURE N VOBL	S		NUMBE PICTU IN VO	RES	PIC	BER OF TURES VOBU#1		NUMBE PICTU IN VO	RES
						<u>-</u>					
TOT CELL TIM ID DUF TIC	AL OF ME CE NA DA	ELL S	ELL ATA ET ESC- RIPTO	T   PF -   S	LL ME IYSICA ZE	OF CON	NT	TIME CODE TABLE	NUMBE OF ACQUI RED DEFEC	- REI	DUI- DECT DRESS
<pre><remarks> SET IS ALSO REFERRED TO AS EXTENT</remarks></pre>											
CELL DATA GENERAL INFOR- MATION  ACQUIRED CELL CELL SUB- PICTUF INFOR- MATION  MATION  CELL SUB- PICTUF INFOR- MATION  MATION  MATION							URE )R-				
CELL TI	ME IN	NFORMA	TION	CTI	#m		_ = - =	=====			 i
CELL TI	ME G	ENERAL	INF	ORMA	ATION	#m	CELI	_ VOBU	TABL	E #m	1
VOBU VOBU VOBU INFORMATION INFORMATION #1 #2											
	_										• :
VOBU GENERAL DUMMY PACK SYNCHRONIZATION INFORMATION											

FIG.8

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CODDECDONDING	LAICODHATION	INCODMATION	NUMBER OF
CORRESPONDING	INFORMATION	INFORMATION	NUMBER OF
INFORMATION	NAME	CONTENTS ADDRESS VALUE OF	BYTES USED
VOBU GENERAL	I-PICTURE	DIFFERENTIAL ADDRESS VALUE OF	,
INFORMATION	END	I-PICTURE END POSITION FROM	
5/11/11/15/5/5/	POSITION	VOBU START POSITION	
DUMMY PACK	NUMBER OF	NUMBER OF DUMMY PACKS IN VOBU	[
INFORMATION	DUMMY PACKS		2.1112
	DUMMY PACKS	DUMMY PACK INSERTION	2 x DUMMY
ł	DISTRIBUTION		PACK
		OF VOBU, AND EACH NUMBER OF	NUMBER
		DUMMY PACKS (2 BYTES EACH)	
AUDIO	AUDIO STREAM	NUMBER OF CHANNELS OF AUDIO	11
SYNCHRONIZATION		STREAM	
INFORMATION	1-PICTURE	DIFFERENTIAL ADDRESS VALUE OF	1
	AUDIO	SECTOR INCLUDING AUDIO PACK OF	
	POSITION #1	THE SAME TIME AS I-PICTURE	)
		START TIME FROM START OF VOBU	
		(MSB = "0" : LOCATED BEFORE	
		VOBU, MSB = "1" : LOCATED AFTER	
		VOBU)	
	I-PICTURE	INDICATE SAMPLE NUMBER OF AUDIO	2
<u> </u>	START AUDIO	SAMPLE POSITION OF THE SAME	
	SAMPLE	TIME AS I-PICTURE START TIME IN	
	NUMBER #1	SECTOR AS COEFFICIENT OF SERIAL	
		NUMBERS OF ALL AUDIO PACKS	
	AUDIO	PRESENCE/ABSENCE OF	1
	SYNCHRONIZATION	SYNCHRONIZATION INFORMATION	
	INFORMATION	BETWEEN AUDIO AND VIDEO STREAMS	
	FLAG #1	(NEXT ITEM IS NOT AVAILABLE IF	
		ABSENT)	
	AUDIO	THE NUMBER OF AUDIO SAMPLES	2
		INCLUDED IN VOBU	
	DATA		
			1
·	I-PICTURE AUDIO	POSITION #2	1
		POSITION #2  AUDIO SAMPLE NUMBER #2  ZATION FLAG #2  ZATION DATA	2
	AUDIO SYNCHRONIZ	7ATION FLAG #2	1
		ZATION DATA	2
	AUDIO SYNCHRONIZ	LATTUN DATA	14

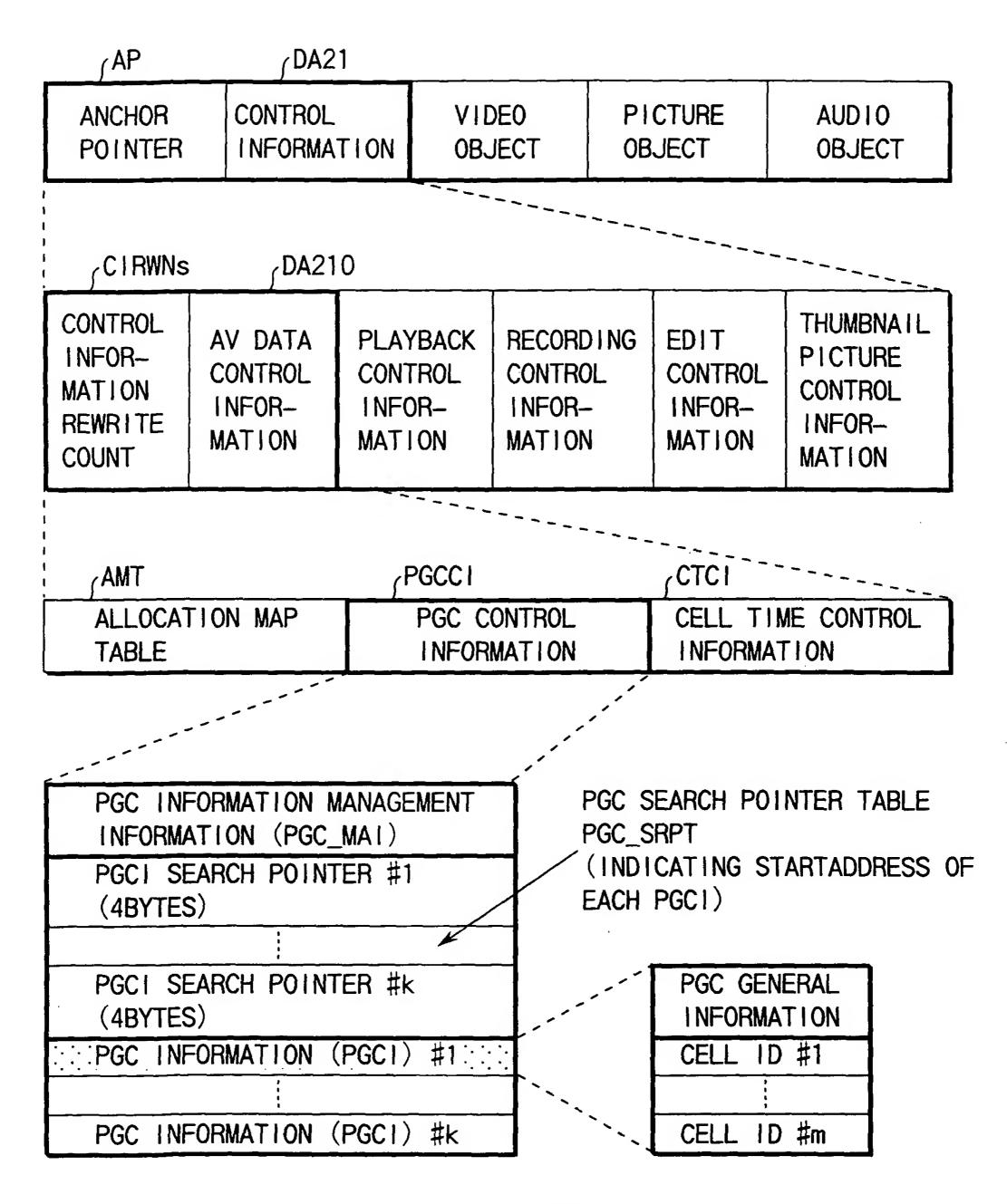


FIG. 10

# POSITIONS OF SHIFT PRODUCED BETWEEN ECC BLOCK BOUNDARY AND VOBU BOUNDARY

							<u> </u>			
			V	CE	LL		Y			
DATA	CHANG	E AREA		VOB	U#g			VOBU#	g+1	
ECC	ECC	ECC	ECC	ECC	ECC	/		ECC	1 1	
BLOCK	BLOCK	BLOCK	BLOCK	BLOCK	BLOCK		BLOCK	BLOCK	BLOCK	

FIG. 11

# SHIFT-REMOVED POSITIONS BETWEEN BOUNDARIES OF ECC AND VOBU

		<u> </u>	CELL			1				
DATA	CHANGE	AREA	V0BU#g					VOBU#	g+1	
ECC BLOCK	ECC BLOCK				ECC BLOCK			ECC BLOCK	ECC BLOCK	

FIG. 12

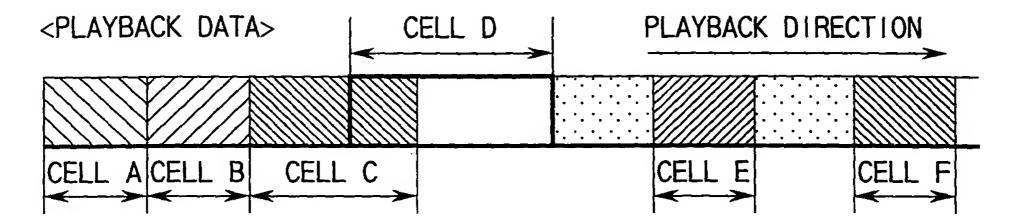


FIG. 13

#### PGC INFORMATION

PGC	<b>2</b> #1	PGO	C#2	PGC#3		
NUMBER (	OF CELLS	NUMBER (	OF CELLS	NUMBER OF CELLS = 5		
CELL#1	CELL A	CELL#1	CELL D	CELL#1	CELL E	
CELL#2	CELL B	CELL#2	CELL E	CELL#2	CELL A	
CELL#3	CELL C	CELL#3	CELL F	CELL#3	CELL D	
				CELL#4	CELL B	
				CELL#5	CELL E	

FIG. 14

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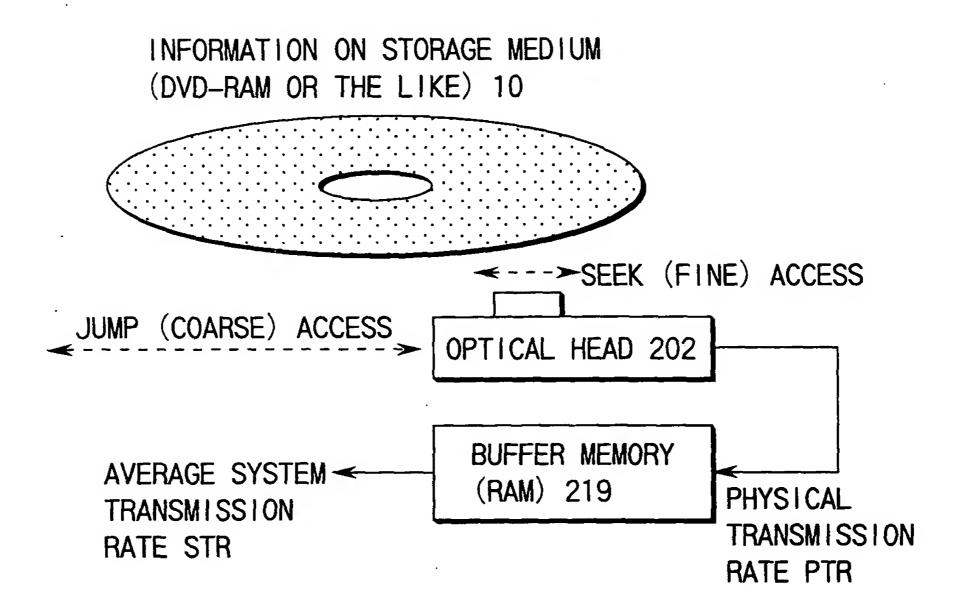


FIG. 15

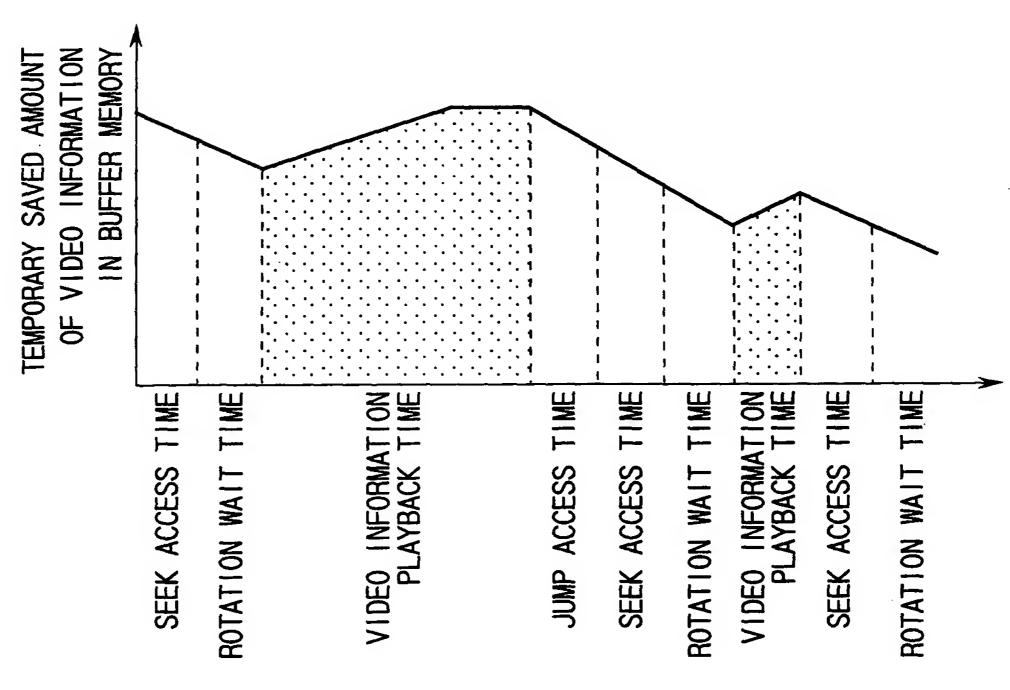
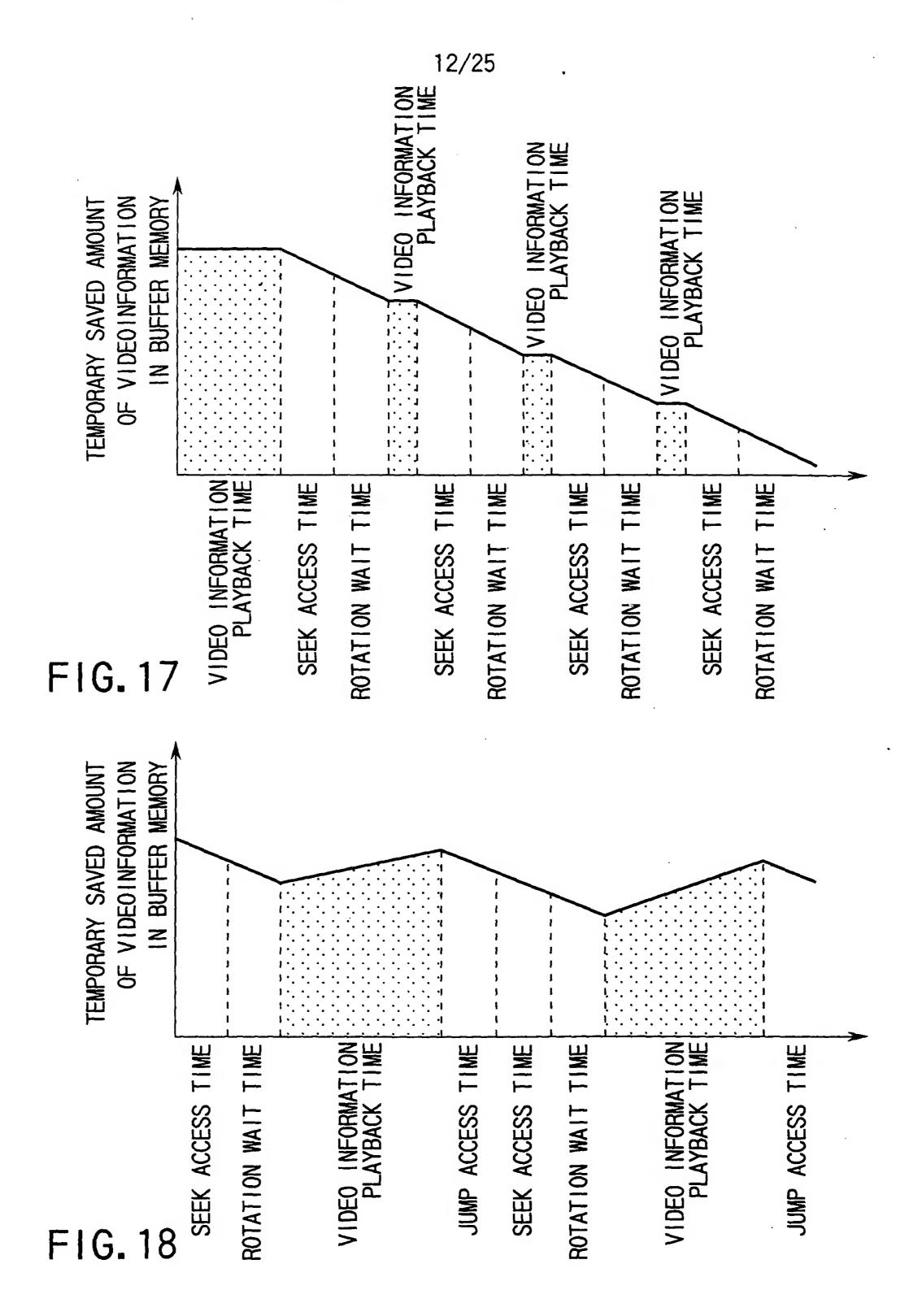


FIG. 16



OBLON, SPIVAK, ET AL DOCKET #:242947US2S DIV INV:Hideo ANDO et al. SHEET 13 OF 25

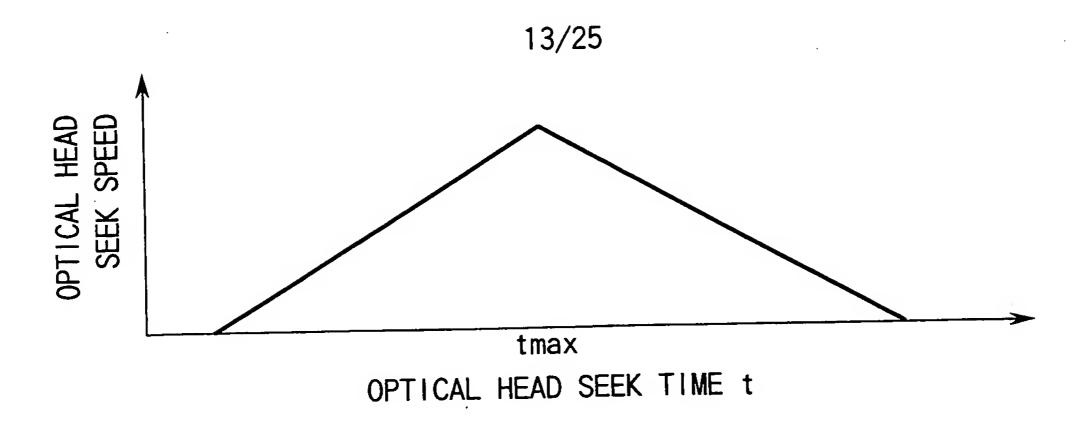


FIG. 19

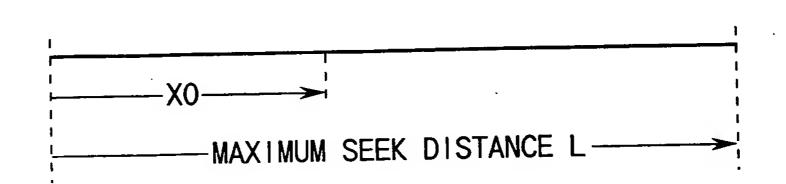


FIG. 20

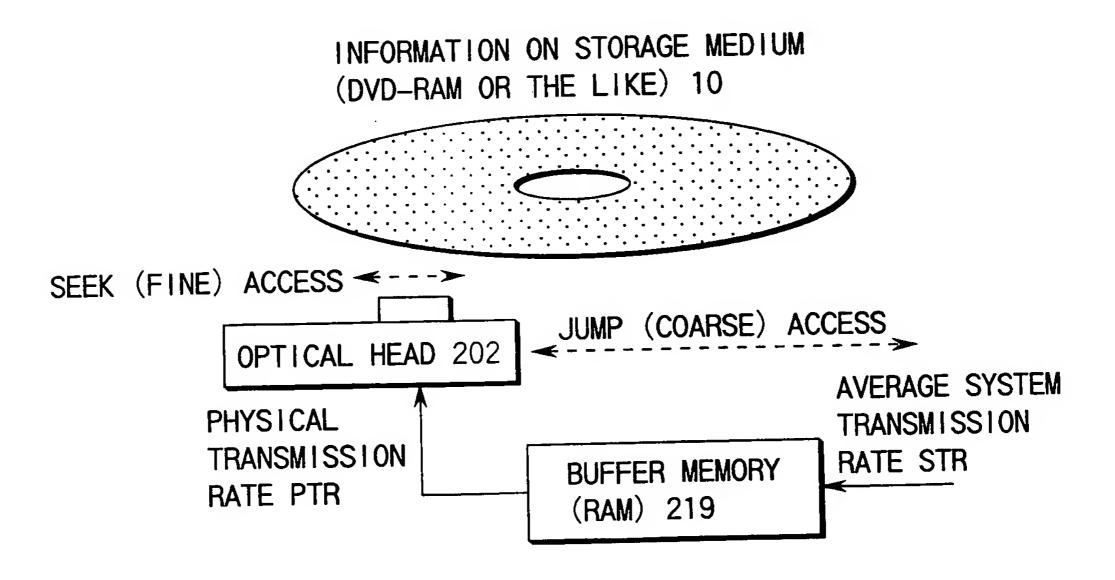


FIG. 21

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FREE AREA 107	CELL #1			CELL	_ #2	CELL #3			
7	ł	i i	i			•	i .	í	VOBU 108 j

FIG. 22

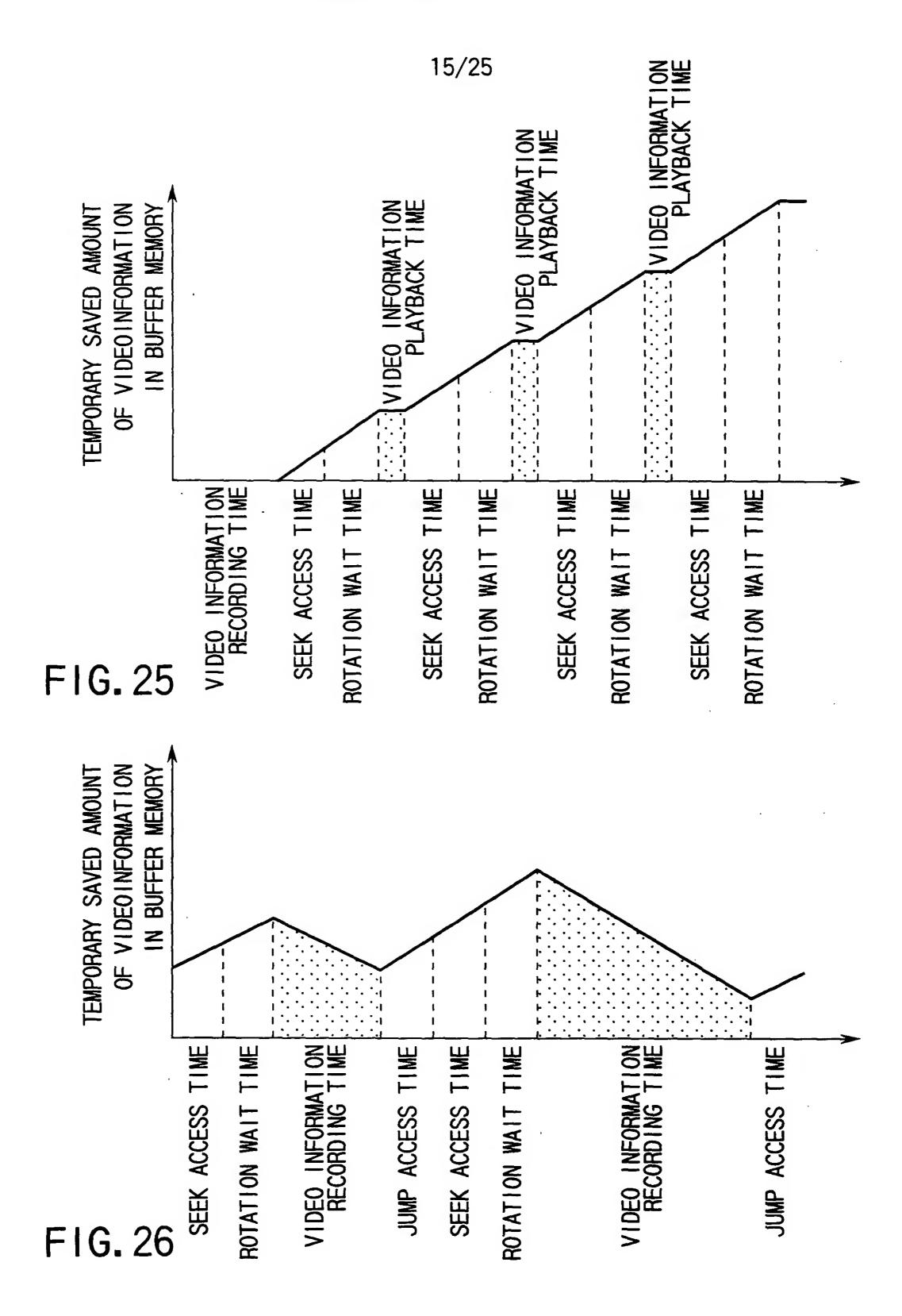
FREE AREA	CELL #1		CELL #2A	#2A   CELL #2		2B	CELL #3		3		
	V0BU	V0BU	V0BU	V0BU	VI	)BU	VOBU	V0BU	VOBU	VOBU	VOBU
	108a	108b	108c	108d	VI	(8e)	108f	108g	108h	108 i	108 j

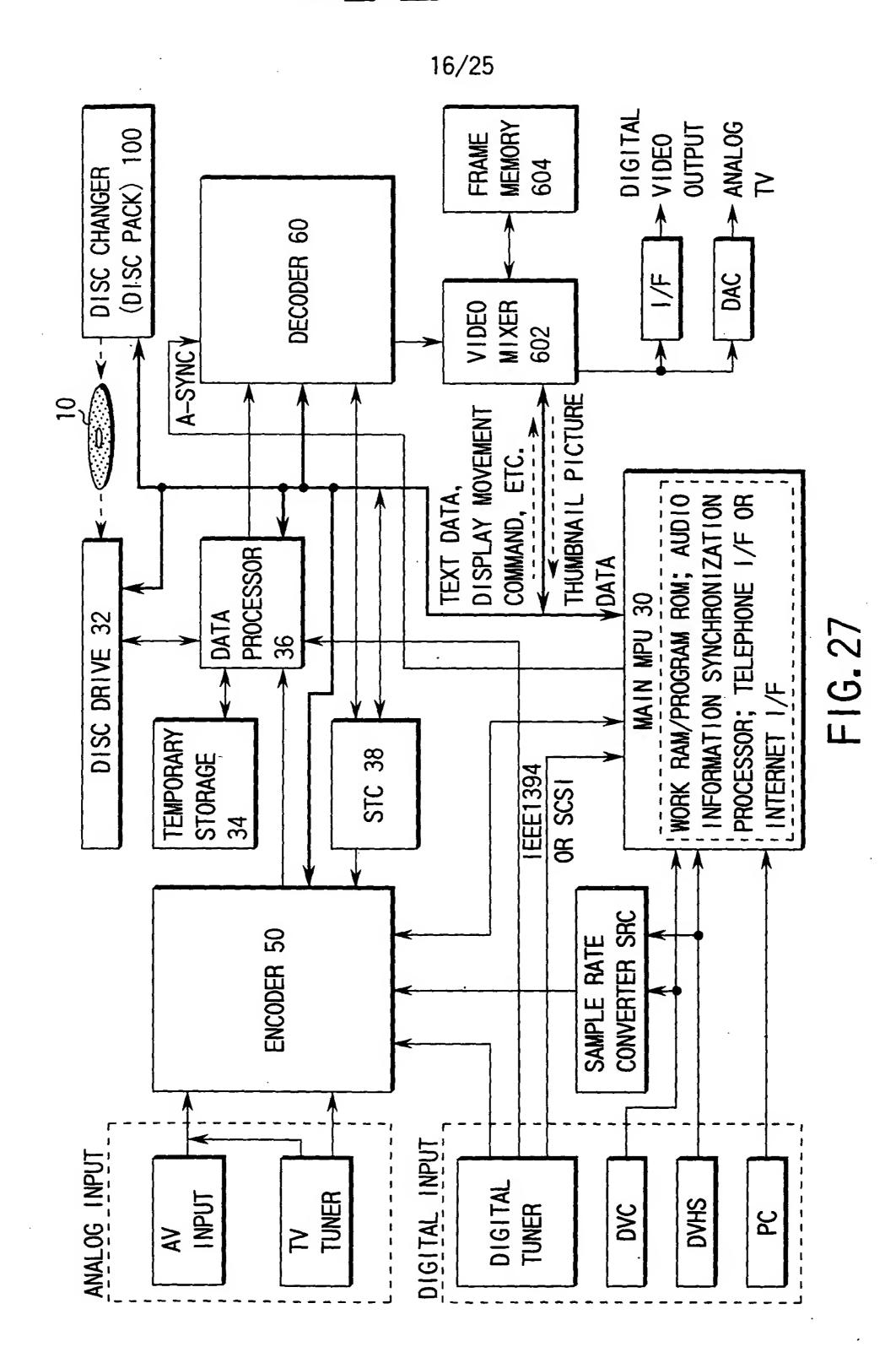
FIG. 23

CELL #2A	CELL #1		CELI	CELL #2B			CELL #3		
VOBU: VOBU	V0BU	V0BU	V0BU	VOBU	V0BU	V0BU	V0BU	VOBU	VOBU
108d* 108p	108a	108b	108c*	108q	108f	108g	108h	108 i	108 j

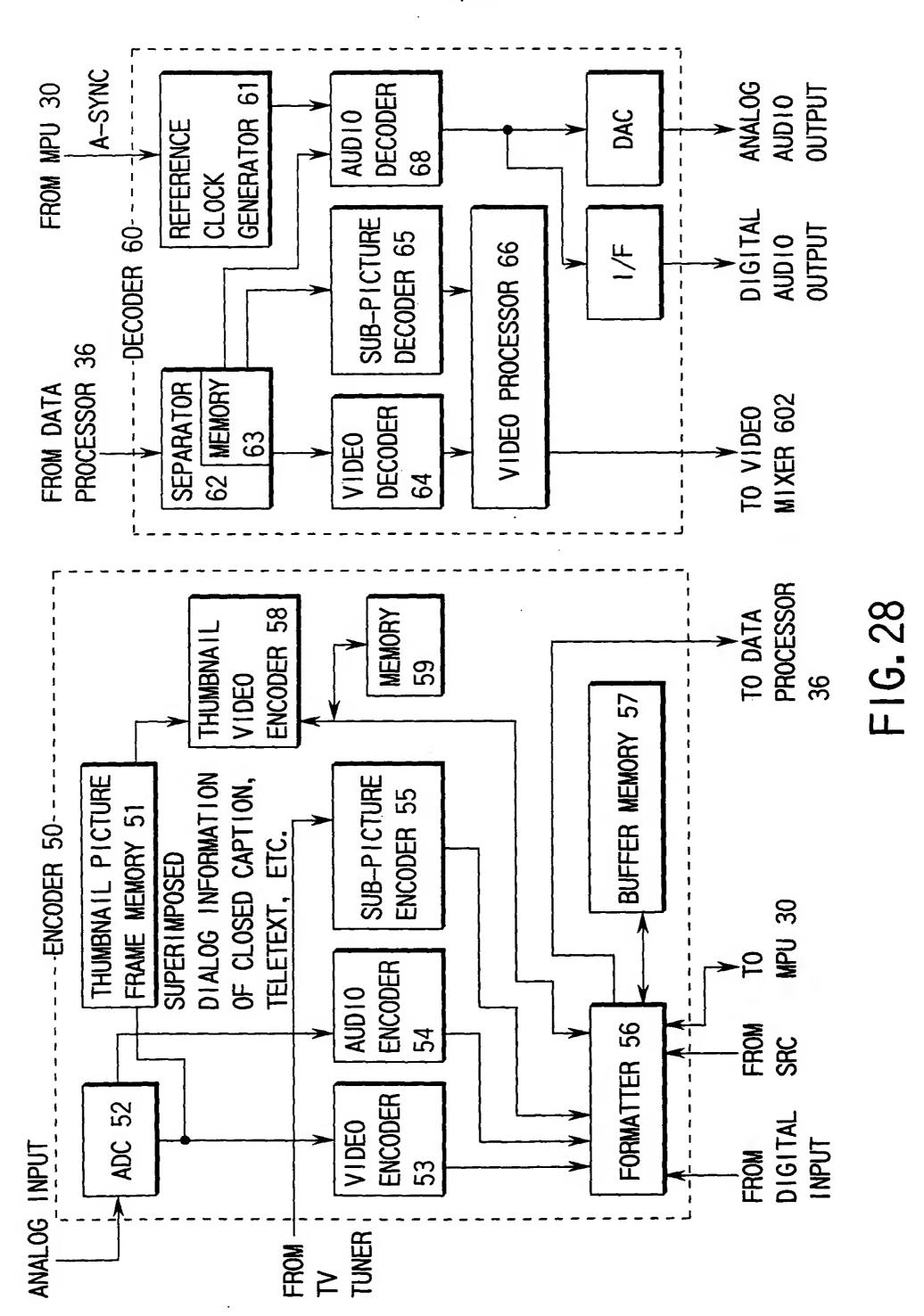
FREE AREA 106

FIG. 24





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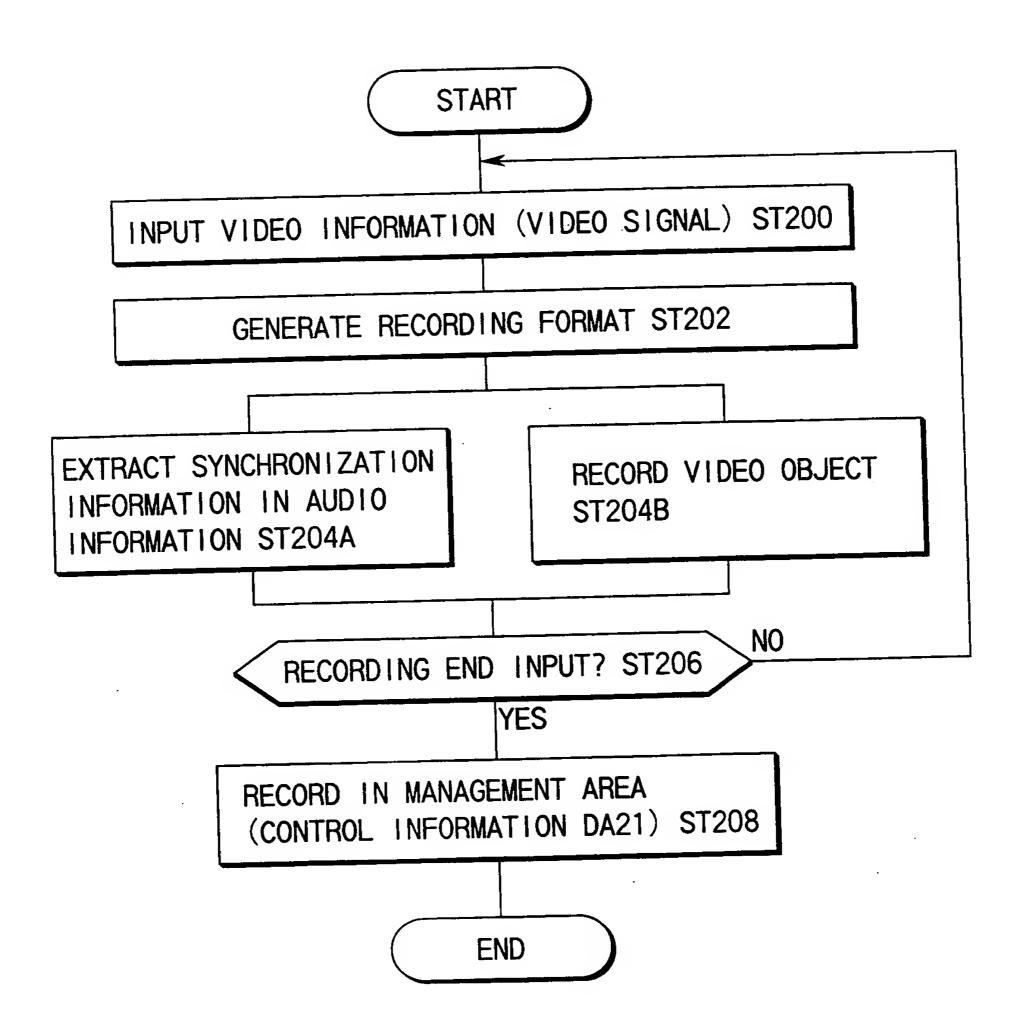
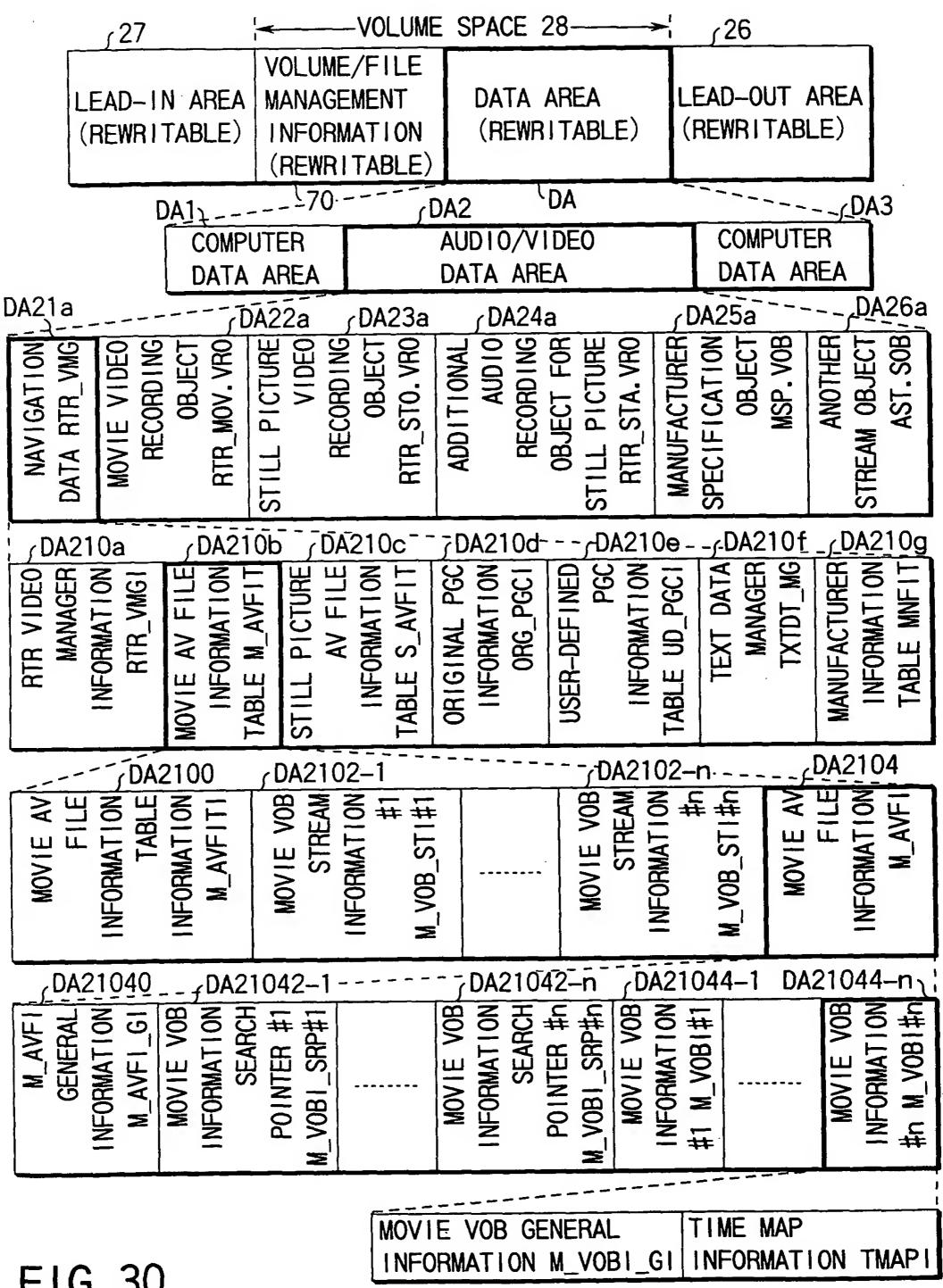


FIG. 29

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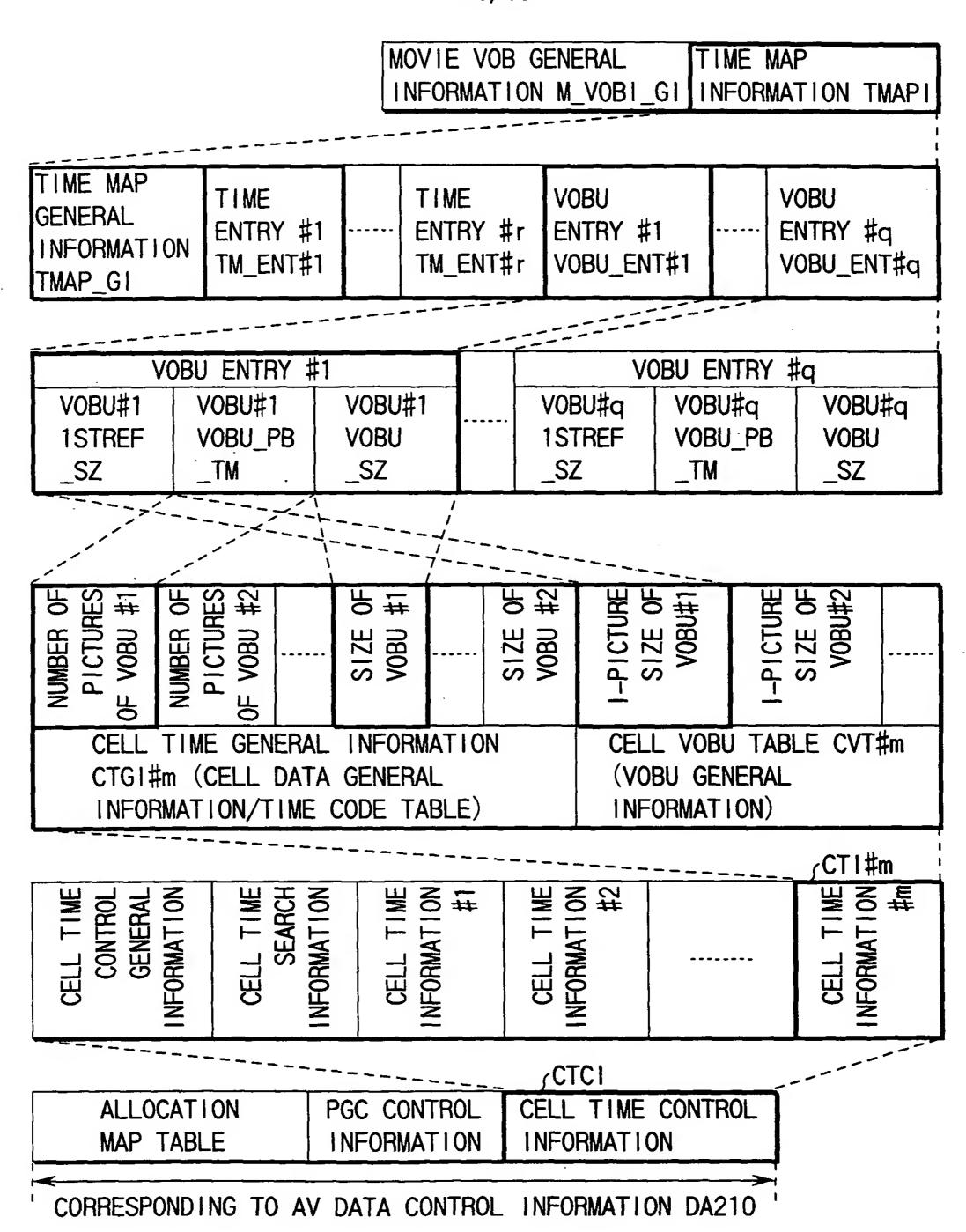


FIG. 31

## TIME MAP GENERAL INFORMATION TMAP\_GI

THE WATER			
RELATIVE BYTE POSITION	FIELD NAME	CONTENTS	NUMBER OF BYTES
0-1	TM_FNT_Ns	NUMBER OF TIME ENTRIES	2
2–3	VOBU_ENT_Ns	NUMBER OF VOBU ENTRIES	2
4–5	TM_OFS	TIME OFFSET	2
6–9	ADR_OFS	ADDRESS OFFSET	4

# FIG. 32

## TIME ENTRY TM\_ENT

RELATIVE BYTE POSITION	FIELD NAME	CONTENTS	NUMBER OF BYTES
0–1	VOBU_ENTN	VOBU ENTRY NUMBER	2
2	TM_DIFF	TIME DIFFERENCE	1
3–6	VOBU_ADR	TARGET VOBU ADDRESS	4

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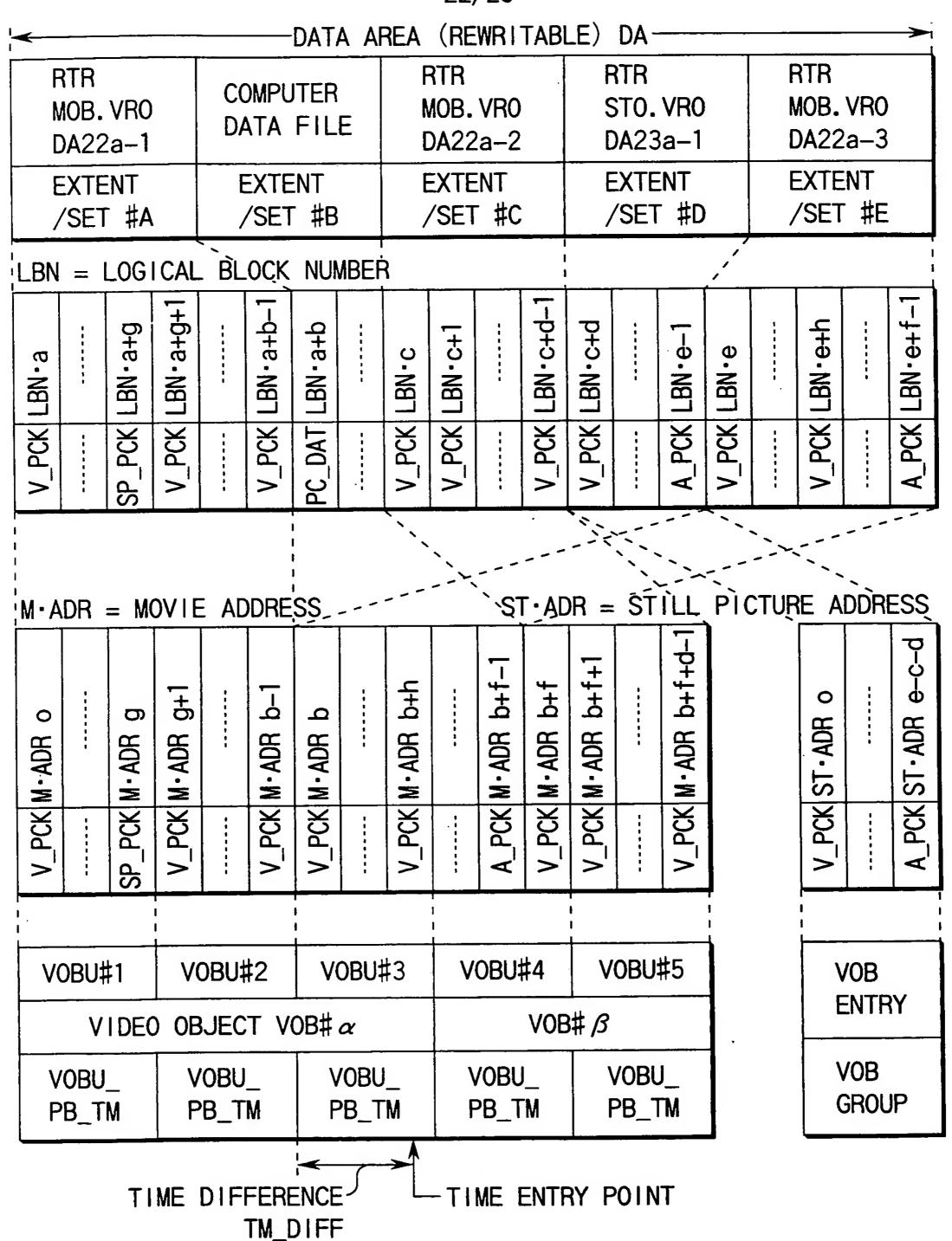


FIG. 34

# ROOT DIRECTORY **SUBDIRECTORY** DVD\_RTR DIRECTORY FILE RTR. IFO (NAVIGATION DATA RTR\_VMG) RTR. BUP (BACKUP OF RTR. IFO) RTR. MOV. VRO (MOVIE VIDEO OBJECT) RTR\_STO. VRO (STILL PICTURE VIDEO OBJECT) RTR\_STA. VRO (ADDITIONAL AUDIO OBJECT FOR STILL PICTURE) MSP. VOB (MANUFACTURER SPECIFICATION OBJECT) AST. SOB (ANOTHER STREAM OBJECT) RTR = REAL-TIME RECORDING OTHER DIRECTORIES VIDEO\_TS (VIDEO TITLE SET) AUDIO\_TS (AUDIO TITLE SET) SUBDIRECTORY FOR OTHER FILES SAVING COMPUTER DATA

FIG. 35

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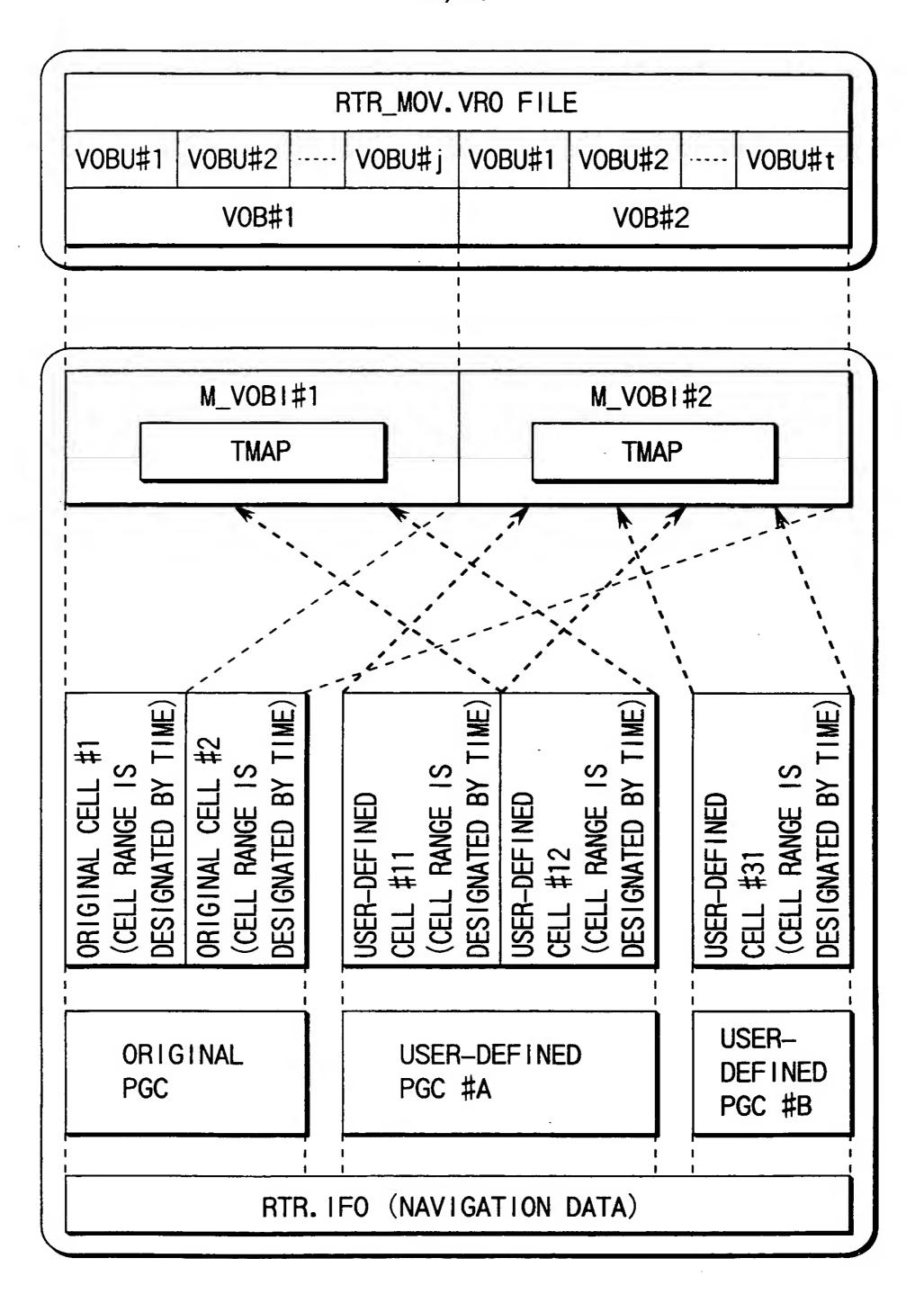


FIG. 36

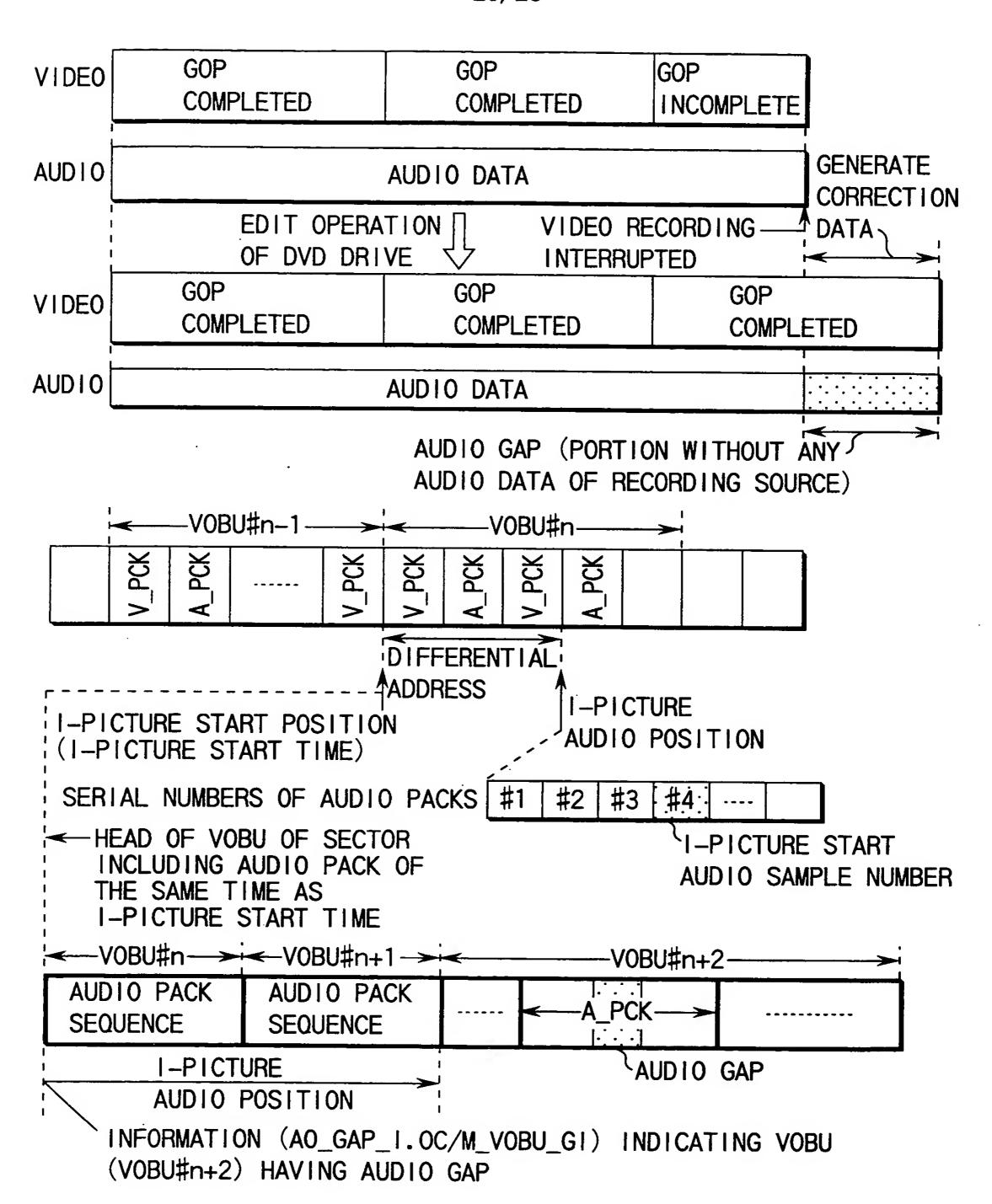


FIG. 37